

Amendments to the Specification:

Please delete the paragraphs starting at page 5, line 11 and ending at page 7, line 18, and insert the following new paragraph in their place:

According an embodiment of the present invention, there is provided a method for asynchronously transmitting one or more incremental database updates from a primary site to a remote site, the primary site and the remote site interconnected by at least one communication link. The method includes: (a) destaging modified data to a first volume at the primary site for a current database update and updating one or more bits in a first bitmap at the primary site that indicate one or more tracks on the first volume that are to be overwritten with the modified data; (b) performing a first point in time copy of the modified data of the first volume to a second volume at the primary site by transferring the first bitmap to a second bitmap at the primary site for indicating the modified data that is to be transmitted to a third, volume at the remote site for the current database update; (c) synchronizing the second volume with the third volume for the current database update by transmitting the modified data of the second volume to the third volume as indicated by the one or more bits in the second bitmap; and (d) performing a second point in time copy of the modified data of the third volume to a fourth volume at the remote site. A corresponding system and program storage device are also provided.

Please amend the paragraph starting at page 19, line 20 and ending at page 20, line 5, line 26 as follows:

Figure 5 is a more detailed system diagram 500 of the exemplary Remote FlashCopy system 100 system of Figure 1 for accomplishing the asynchronous incremental database update from a primary site to a remote recovery site according to the present invention. Figure 5 particularly illustrates exemplary DASD controller units (i.e., controllers) 502 and 516 associated respectively with the local LSS 104 for the primary site 101 and the remote LSS 120 for the remote site 103. It is noted that the DASD controllers 502 and 516 include microcode (i.e., Unicode) for performing the asynchronous incremental database updates according to the present invention. Preferably, each of the respective DASD controllers 501-502 and 516 includes an internal disk (not shown) that is specifically used by each respective controller for storing the microcode and loading the microcode into processor memory (not shown) associated with each DASD controller for execution. The local DASD controller 502 includes a host adapter 504 for enabling communication (i.e., read/write/update of data) between the application host 102 and the local DASD controller 502. The remote DASD controller 516 likewise includes a host adapter 510-520 for enabling communication (i.e., read/write/update of data) between the recovery host 118 and the remote DASD controller 516. The DASD controllers 502 and 516 include PPRC adapters 506 and 518 for establishing a PPRC session to enable transmission of database updates from the primary site 101 to the remote recovery site 103 according to the present invention. Cache 510 in the local DASD controller 502 caches the most recently accessed data from Volumes A 106, thereby providing improved performance of the application host 102 since data may be obtained from the cache 510 instead of the associated volume A 106 if there is a cache hit. As described above, NVS 512 of the local DASD controller 502 buffers modified data until it is written to the associated primary Volume A 106. Cache 524 and NVS 522 of the remote DASD controller 516 provide like functionality to that of the cache 510 and NVS 512 of the local DASD controller 502. Device adapters 514 and 526 enable respective DASD controllers 502 and 516 to access data on the associated Volumes A-D (i.e., reference numbers 106, 108, 122 and 124). The local DASD controller 502 provides a memory area 508 for maintaining (i.e., storing and modifying) the FlashCopy bitmap 110 and the PPRC bitmap

112 and memory area 509 for maintaining the relationship table 400 according to the present invention. The remote DASD controller 516 likewise provides memory areas 528 and 529 for respectively maintaining a FlashCopy bitmap 126 and relationship table 400. It is noted that the stored bitmaps and tables are read into the processor memory (not shown) associated with each respective DASD controller, modified according to the present invention, and the modified bitmaps and table are then written to each respective DASD controller.

Please delete the current Abstract and enter a new Abstract as indicated on the following page: